

HEALTH CARE SYSTEM, SERVER COMPUTER SYSTEM
AND MACHINE-READABLE DATA STORAGE MEDIUM

BACKGROUND OF THE INVENTION

5 1. Field of the Invention

The present invention relates to a health care system,
a health care method and a machine-readable data storage medium
on which a program for health care is recorded, particularly
relates to a health care system and a health care method for
10 managing an everyday health condition, guiding the improvement
and grasping the effect to improve daily living habit in a home
and a machine-readable data storage medium on which a program
for health care is recorded.

15 2. Description of the Related Prior Art

As patients of a disease due to living habit increase,
everyday living habit in a home is required to be improved.
Therefore, a medical institution and a health service supplier
utilize a home health care system that manages an everyday health
20 condition, guides the improvement and grasps the effect.

Heretofore, a medical institution and a health service
supplier use a home health care system in which a database server
for health care is installed, a home health care terminal is
installed in a home of an outpatient of the medical institution
25 and a home of a party to a contract and these are connected via
a telecommunication line. This terminal collects everyday
health information and everyday vital information of the
outpatient and the party to the contract and sends them to the

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database server via the telecommunication line. The medical institution and the health service supplier analyze the information using the database server and advise utilizing a telephone and a simple comment sending function if necessary.

5 As described above, the health care system is a system that a medical institution and a health service supplier individually install a database server and directly communicate with the database server via a common carrier leased line to connect to a viewer for reference.

10 When the above-mentioned health care system is used, a medical institution and a health service supplier are required to install a database server, a terminal and a telecommunication line at their own expenses. Therefore, there is a problem that considerable investment in facilities is required independent
15 of the number of objects.

 There is also a problem that as line expenses, dedicated software and others are required for an outpatient and a party to a contract to access to the database server, it costs very much investment and operation expenses.

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SUMMARY OF THE INVENTION

 The object of the invention is to provide a health care system and a health care method wherein much initial plant and equipment investment is not required for a medical institution
25 and a health service supplier and a load upon system operation and maintenance personnel is reduced and a machine-readable data storage medium on which a program for health care is recorded.

 Another object of the invention is to provide a health

care system and a health care method wherein the reduction of operation costs such as a charge for communication and the selection of a medical specialist and a health service supplier of good quality are enabled for an individual to whom health
5 care service is provided and a machine-readable data storage medium on which a program for health care is recorded.

To achieve the objects, the health care system is a health care system that manages a health condition, guides the improvement and grasps the effect, is provided with a computer system having a database, plural viewers for referring to the contents of the database, a terminal and a channel mutually connecting the computer system, the viewers and the terminal, the computer system includes means for registering individual
10 information and vital information respectively sent from the terminal in the database, means for registering a comment sent from the viewer in the database and means for calculating database management expenses and charging the expenses, the viewer includes means for referring to the database and means for sending
15 the comment related to the vital information to the computer system, and the terminal includes means for sending the vital information to the computer system and means for referring to the database.

25 Another health care system is a health care system that manages a health condition, guides the improvement and grasps the effect, is provided with a health care database server used by a provider, plural health care data reference viewers used

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for a health care institution, a home health care terminal used
by a customer of the health care institution and the Internet
mutually connecting the health care database server, the health
care data reference viewers and the home health care terminal,
5 the health care database server is provided with a vital
information database and an information provision database, the
health care database server includes means for accepting an order
for database management business from the health care institution
and registering the individual data of the customer, means for
10 registering vital information sent from the home health care
terminal in the vital information database, means for registering
a comment sent from the health care data reference viewer in
the information provision database and means for calculating
database management expenses and charging the health care
15 institution the expenses, the health care data reference viewer
includes means for referring to the vital information database
and means for sending a comment related to vital information
of the customer in the vital information database to the health
care database server, and the home health care terminal includes
20 means for sending the vital information of the customer to the
health care database server and means for referring to the
information provision database.

A health care method according to the invention includes
a step that the health care database server accepts an order
25 for database management business from a medical institution or
a health service supplier and registers the individual data of
a customer of the medical institution or the health service
supplier, a step for sending the vital information of the customer

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from the home health care terminal to the health care database server via the Internet, a step for registering the sent vital information in the vital information database of the health care database server, a step that the health care data reference viewer of the medical institution or the health service supplier refers to the vital information database via the Internet, a step for sending a comment related to the vital information of the customer from the health care data reference viewer to the health care database server via the Internet, a step for registering the sent comment in the information provision database of the health care database server, a step that the home health care terminal refers to the information provision database via the Internet and a step that the health care database server calculates database management expenses and charges the medical institution or the health service supplier the expenses.

A machine-readable data storage medium according to the invention records a program for instructing the server to execute processing for accepting an order for database management business from a medical institution or a health service supplier and registering the individual data of a customer of the medical institution or the health service supplier, processing for registering vital information sent from a home health care terminal used by the customer via the Internet in a vital information database, processing for registering a comment sent from a health care data reference viewer used by the medical institution or the health service supplier via the Internet in an information provision database and processing for calculating database management expenses and charging the medical

institution or the health service supplier the expenses.

BRIEF DESCRIPTION OF THE DRAWINGS

5 The above and other objects, features and advantages of the present invention will become apparent from the following detailed description when taken with the accompanying drawings in which:

10 FIG. 1 is a block diagram showing a first concrete example of a health care system;

FIG. 2 is a flowchart showing a concrete example of a health care method; and

15 FIG. 3 is a block diagram showing a second concrete example of the health care system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

20 FIG. 1 is a block diagram showing the configuration of a health care system equivalent to a first embodiment of the invention. The health care system equivalent to the first embodiment is composed of a health care database server 20, a health care data reference viewer 30, a health care data reference viewer 40, a home health care terminal 50, a specific individual terminal 60 and the Internet 10 mutually connecting these.

25 The health care database server 20 is information processing equipment used by a provider 2 which is an application service provider (ASP). The health care database server is provided with a health related information database 21, a vital information database 22 and an information provision database

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23 inside or outside. The health care database server 20 is provided with a function for accepting an order for a database management business, registering the personal data of a customer and setting access authority to a database and a function for calculating data storage expenses and charging the expenses.

The health care data reference viewer 30 means a personal computer used by the medical institution 3. This is provided with an input device 31 such as a keyboard, a storage 32 for temporarily storing data and an output device such as a display 33 and a printer 34.

The medical institution 3 is provided with access authority to a vital information database 22 related to its own patient and can refer to vital information data related to the patient using the health care data reference viewer 30. The medical institution also requests the health care database server 20 to register diagnosis and advice based upon the data and information related to health prepared in the health related information database 21 beforehand in the information provision database 23 every patient using the health care data reference viewer 30.

The health care data reference viewer 40 means a personal computer used by a health service supplier 4. The health care data reference viewer 40 is provided with an input device 41 such as a keyboard, a storage 42 for temporarily storing data and an output device such as a display 43 and a printer 44. The medical institution 3 is given access authority to the vital information database 22 related to its own client and can refer to vital information data using the health care data reference

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viewer 40. The medical institution 3 also requests the health care database server 20 to register diagnosis and advice based upon the vital information data and health related information prepared in the health related information database 21 as contents in the information provision database 23 every client using the health care data reference viewer 40.

The home health care terminal 50 means a dedicated terminal used by a customer 5, that is, a patient of the medical institution 3 or a client of the health service supplier 4 and is provided with a display 53 so that the result of the measurement of blood pressure, an electrocardiogram, answers to a medical examination by an interview and others can be input. The display 53 may be also provided with a touch panel for screen display and data input. The home health care terminal 50 is provided with a function for requesting everyday vital signs of a patient or a client and answers to a medical examination by an interview to be registered in the vital information database 22 of the provider 2 and a function for referring to the information provision database 23. The home health care terminal 50 is not limited to a dedicated terminal and may be also a general purpose personal computer if only it has a function for inputting the data of a sphygmomanometer and an electrocardiograph.

The specific individual terminal 60 means a personal computer used by a specific individual 6. The specific individual terminal is provided with an input device 61 such as a keyboard and a display 63. The specific individual 6 means an individual required to check a patient's or a client's health condition. It is normally a close relative such as a family.

The specific individual terminal 60 is provided with access authority to the information provision database 23. The specific individual 6 can refer to the health condition of a close relative and others who remotely lives using the specific individual terminal 60.

As described above, the provider 2 is entrusted with the management of databases by the medical institution 3 or the health service supplier 4 as outsourcing business. Hereby, the provider executes accounting for the management of the vital information of a patient or a client provided everyday, the management of the information provision database 23 and the use of contents such as health guidance information and gets continual income.

The medical institution 3 or the health service supplier 4 to which or to whom access authority to the vital information database 22 is offered refers to the vital information data of its own patient or client and registers diagnosis and advice based upon the data and information related to health beforehand prepared in the provider 2 in the information provision database 23 every patient or client. The specific individual 6 receives suitable advice via the home health care terminal 50, referring to the information provision database 23.

FIG. 1 shows both the medical institution 3 and the health service supplier 4, however, only either may be also included.

The provider 2 may be also an internet service provider (ISP). In this case, ISP provides the database server in this embodiment and performs the above-mentioned health care business. ISP can get not only the income of the connection charge of the

Internet but the income of health care business.

Next, referring to FIGs. 1 and 2, the operation will be described. FIG. 2 is a flowchart showing the operation of the first embodiment.

5 First, the medical institution 3 and the health service supplier 4 entrust the outside provider 2 with the management business of the databases related to daily vital information such as vital data and answers to a medical examination by an interview collected from an outpatient and a client under
10 contract (a step S1). The provider 2 accepts the management business, registers the individual data of the customer 5 in the health care database server 20 and sets access authority to the databases (a step S2). The individual data of the customer
15 5 means the name, the user identification data (ID), the password and others of the customer 5, that is, a patient or a client. Further, the medical institution 3 and the health service supplier 4 also registers the individual data of the specific individual 5 if necessary.

20 The home health care terminal 50 installed in each home of the customer 5 sends vital signs measured everyday by the customer and answers to a medical examination by an interview to the health care database server 20 of the provider 2 via the Internet 10 everyday (a step S3).

25 The health care database server 20 registers these signs and answers in the vital information database 22 (a step S4).

The medical institution 3 and the health service supplier 4 refer to the vital information database 22 via the health care data reference viewer 30 or 40 (a step S5). The medical

institution 3 and the health service supplier 4 prepare comment including suitable diagnosis, daily life guidance and health guidance respectively related to an object based upon the referred data and sends it to the health care database server 20 (a step S6). The health care database server 20 registers the comment in the information provision database 23 (a step S7).

In case information prepared in the health related information database 21 beforehand as the ready-made guidance and prescription of meals, exercise, rehabilitation and others is utilized, the medical institution 3 and the health service supplier 4 request the information to be also registered in the information provision database 23. The medical institution 3 and the health service supplier 4 utilize these information as advice for an individual. They perform setting according to the health condition of the customer 5 such as change the items of medical examination by an interview and the items of measurement if necessary via the health care data reference viewer 30 or 40.

The customer 5 refers to the information provision database 23 via the home health care terminal 50 when he/she views the comment and the advice of the medical institution 3 and the health service supplier 4 and instructs them to be displayed on the display 53 (a step S8). The information provision database 23 is a database every customer 5 and the access authority is set individually in units of the customer 5. The customer 5 can see only the information of his/her database.

The specific individual 6 can always refer to the health

condition of his/her parents and others who remotely live
utilizing the specific individual terminal 60.

The health care database server 20 calculates expenses
for storage every fixed period and sends a bill for storage
5 expenses to the health care data reference viewers 30 and 40
(a step S7). The medical institution 3 and the health service
supplier 4 pay the expenses to the provider via a financial
institution and others. The storage expenses include a charge
for storage in the database, a charge for the utilization of
10 contents for provision and a charge for access to the database.
These expenses are calculated according to a predetermined system
such as a system that a charge per patient or client is fixed
and a system that a charge is proportional to the frequency of
access to the database.

15 The health care database server 20 further prepares a
monthly report including the health information, the summary
and the opinion of the customer 5. The monthly report is sent
to the customer 5 by mail or by facsimile. Or it is sent to
the home health care terminal 50 and may be also printed by a
20 printer via the home health care terminal 50.

Next, a second embodiment of the invention will be
described.

FIG. 3 is a whole block diagram showing the second
embodiment. As shown in FIG. 3, the second embodiment includes
25 a machine-readable data storage medium 70 in addition to the
configuration of the first embodiment shown in FIG. 1. The
machine-readable data storage medium 70 records a program for
health care. The machine-readable data storage medium 70 may

be a magnetic disk, a semiconductor memory, an optical disk and other record media.

The program for health care is read from the machine-readable data storage medium 70 by the health care database server 20. The health care database server 20 executes processing according to the program for health care.

The health care database server 20 is entrusted with database management business by the medical institution 3 or the health service supplier 4 under the control of the program for health care and executes processing for registering the individual data of the customer 5 of the medical institution 3 or the health service supplier 4. Next, the health care database server executes processing for registering vital information sent from the home health care terminal 50 used by the customer 5 via the Internet 10 in the vital information database 22. Third, the health care database server executes processing for registering a comment sent from the health care data reference viewer 30 or 40 used by the medical institution 3 or the health service supplier 4 via the Internet 10 in the information provision database 23. Finally, the health care database server executes processing for calculating database management expenses and charging the medical institution 3 or the health service supplier 4 the expenses.

Further, the health care database server 20 executes processing for registering information provided to the customer as advice information via the health care data reference viewer 30 or 40 out of information in the health related information database 21 in the information provision database 23 under the

control of the program for health care.

Further, the health care database server 20 executes processing for individually setting access authority to the information provision database 23 as a database every customer
5 5 under the control of the program for health care.

While the present invention has been described in connection with certain preferred embodiments, it is to be understood that the subject matter encompassed by the present
10 invention is not limited to those specific embodiments. On the contrary, it is intended to include all alternatives, modifications, and equivalents as can be included within the spirit and scope of the following claims.

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